



DoD Acquisition Policy and SEI CMM Level 3

October 25, 2000

**Software Evaluation IPT Co-leads
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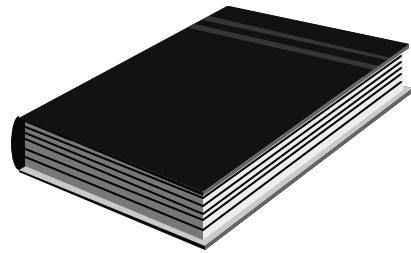


Overview

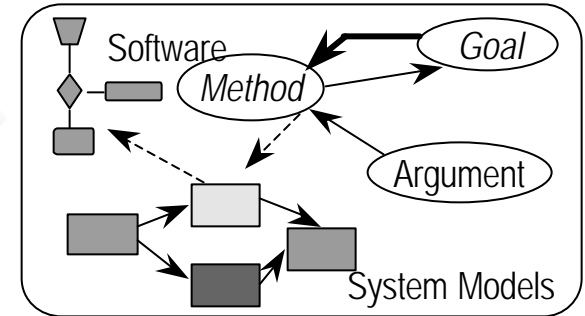
- **DoD Acquisition Policy and SW-CMM Level 3**
- **Software Evaluation IPT**
 - Charter and Objectives
- **Evaluation Tools and Equivalence**
 - Model
 - Method
- **IPT Status**
 - Accomplishments
 - Ongoing Initiatives



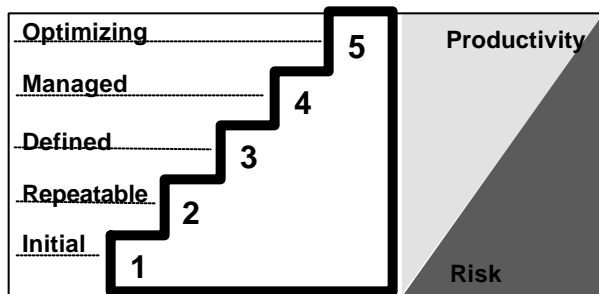
Strategy for *DUSD(S&T) Software Intensive Systems*



Policy



Science & Technology



Discipline



Collaborate



Career Development



ACAT I Acquisition Policy



THE UNDER SECRETARY OF DEFENSE

3010 DEFENSE PENTAGON
WASHINGTON, DC 20301-3010

28 OCT 1998

MEMORANDUM FOR COMPONENT ACQUISITION EXECUTIVES
DIRECTOR OF BALLISTIC MISSILE DEFENSE ORGANIZATION

SUBJECT: Software Evaluations for ACAT I Programs

It is DoD policy that software systems be designed and developed based upon software engineering principles. This includes the selection of contractors with the domain experience in developing comparable software systems, a successful past performance record, and a demonstrable mature software development capability and process. It also requires a software measurement process to plan and track the software program, and to assess and improve the development process and associated software product.

Software development and performance is an integral component of advanced defense systems. Accordingly, it will be a technical requirement for contract that each contractor performing software development or upgrade(s) for use in an ACAT I program will undergo an evaluation, using either the tools developed by the Software Engineering Institute (SEI), or those approved by the DoD Components and the DUSD(S&T).

At a minimum, full compliance with SEI Capability Maturity Model Level 3, or its equivalent level in an approved evaluation tool, is the Department's goal. However, if the prospective contractor does not meet full compliance, a risk mitigation plan and schedule must be prepared that will describe, in detail, actions that will be taken to remove deficiencies uncovered in the evaluation process and must be provided to the Program Manager for approval. The Deputy Under Secretary of Defense (Science & Technology) will define Level 3 equivalence for approved evaluation tools. The evaluation will be performed on the business unit proposed to perform the work. The reuse of existing evaluation results performed within a two-year period prior to the date of the government solicitation is encouraged.

This policy is effective immediately and will be incorporated into the current DoD 5000 series rewrite.


J. S. Gansler



- **Contractor selection**
 - Domain experience
 - Past performance
 - Mature software process
- **Evaluation**
 - Using tools developed by SEI or approved for use by DUSD(S&T)
 - Full compliance with SEI CMM Level 3, or equivalent
 - Risk mitigation plan for deficiencies
 - Equivalence defined by DUSD(S&T) for approved tools
 - Must be performed on business unit proposed to do the work
 - Reuse of evaluation results within a two-year period encouraged



Software Evaluation IPT - Objectives

- **Define equivalency requirement to provide unambiguous yardsticks**
- **Establish evaluator qualifications and evaluation method requirements**
 - **Reduce number of evaluations**
 - **Reduce evaluation cost**
 - **Improve evaluation reliability**



IPT Membership

Government

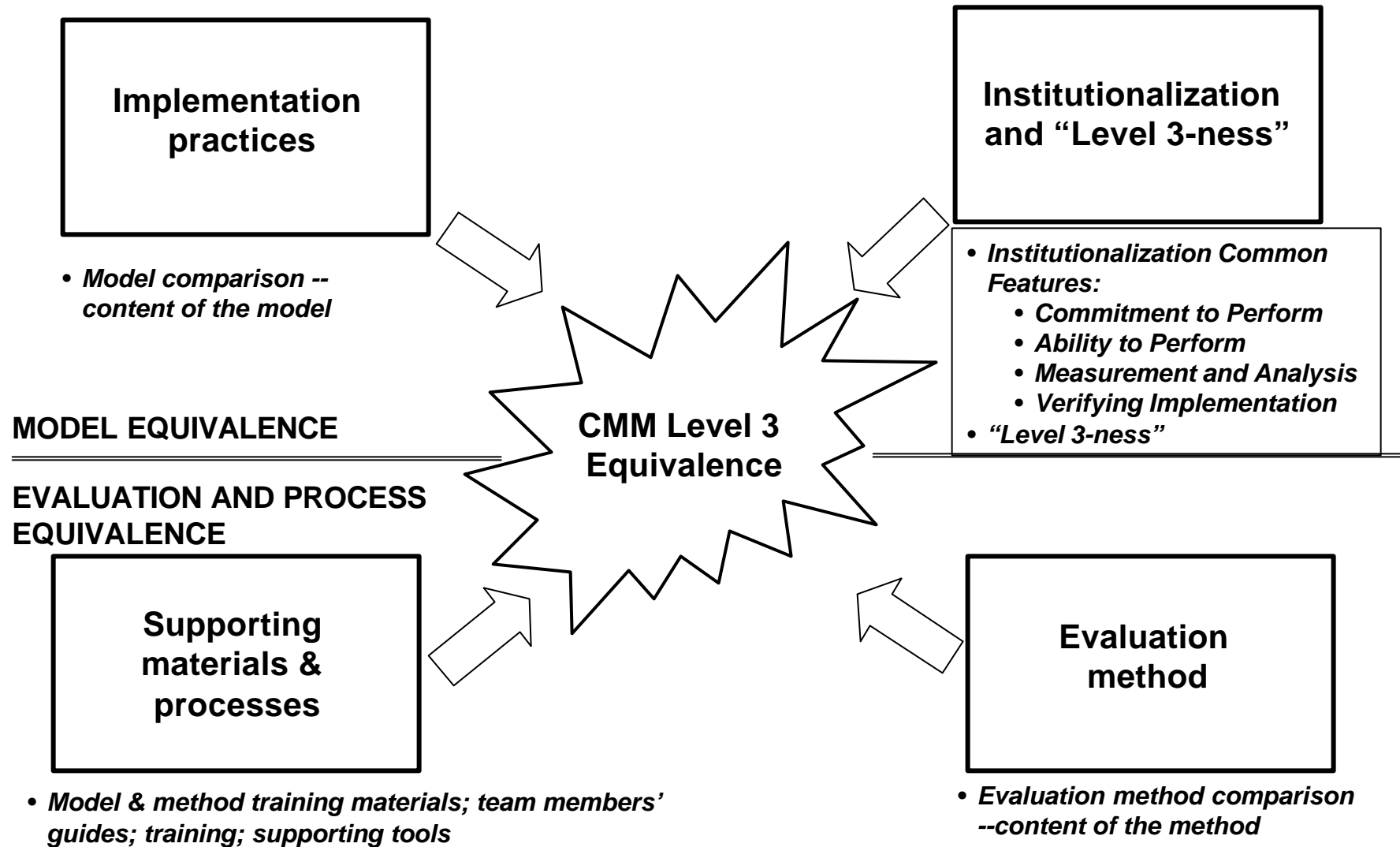
Dr. Jack Ferguson <i>DUSD(S&T)</i> <i>(IPT Lead)</i>	Paul Riviere <i>CECOM</i>	Tony Guido / Darrell Maxwell <i>NAVAIR</i>	LtCol Jeff Cukr <i>SAF/AQ</i>	Beth Springsteen <i>BMDO / IDA</i>
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Industry

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Geoff Draper <i>Harris</i>	Rick Hefner <i>TRW</i>	Jim Sharpe <i>TRW</i>	Jane Moon <i>Raytheon</i>	Ron Pratt <i>Rockwell Collins</i>



Focus Areas for Determining Equivalence





Software Evaluation IPT

Accomplishments and Initiatives



Model Equivalence Team

- Model Equivalence Process

Data Gathering

- Models and Methods
- Appraisal Requirements
- “Level 3-ness”
- Metrics
- Acquisition Approaches
- Subcontractor Evaluation

Evaluation Method Requirements Team

Evaluation Results Reuse Team



Approved Evaluation Tools

- **Software Capability Evaluation (SCE) v3.0**
 - Method and training available
 - <http://www.sei.cmu.edu/>
- **Software Development Capability Evaluation (SDCE)**
 - With approved core set revisions
 - Maintained by USAF ASC/EN
 - Method and training available



SDCE Revisions

- **Mandatory SDCE “core set” of questions**
 - Required for coverage of CMM equivalence
 - Not tailorable
 - May be supplemented with program-specific questions
- **Organizational process institutionalization**
 - 7 SDCE questions covering each CMM process area
 - Coverage of CMM Institutionalization Common Features
 - Policies - Responsibilities - Resources - Training - Measurement - Management Oversight - Objective Review
- **Minor additions or modifications for CMM equivalence**
 - Closure of gap analysis



Industry Concerns

- **Minimal set of evaluation tools**
 - Conserve costly investment in supporting multiple tools
 - Leverage existing tools and methods
 - Too many tools increases cost and risks losing repeatability
- **Reuse of evaluation results**
 - Reduce repetitive evaluations
 - Reuse results across evaluation tools
- **Consistent application of evaluation tools**
 - Evaluation team qualifications and method guidance
 - Reliable and repeatable results
 - Cost effectiveness
- **Maintain program scope for evaluations**
 - ACAT 1 programs
 - Inappropriate for small programs



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